

Claims

1. An isolated polynucleotide sequence wherein said polynucleotide sequence encodes a serine protease and wherein said polynucleotide sequence hybridizes, under high stringency conditions, with SEQ ID NO. 2.
2. The polynucleotide sequence, according to claim 12, wherein said sequence encodes an amino acid sequence comprising SEQ ID NO. 1.
3. A method for identifying thermostable enzymes which comprises contacting a solution to be assayed for said enzymes with known peptide or polypeptide substrates; heating said mixture; and then determining if said substrates have been ligated to form polypeptides.
4. A method for cleaving a peptide bond which comprises contacting a molecule having said peptide bond with a protease comprising SEQ ID NO:1, wherein said protease has an apparent molecular weight of 81 kDa as determined by SDS gel electrophoresis, catalyzes the cleavage of benzoyl-tyrosine ethyl ester, and can be obtained from *P. furiosus*.